State of Alaska

Service Level Agreement

for

Enterprise Technology Services
Infrastructure Services Hosting

June 25, 2012

VERSION 1.0

Date	Author(s)	Version	Change Summary
3/23/12	Corey Kos		Initial Draft created
5/11/12	Corey Kos		Revised Draft to align with the Service Inventory and some other minor corrections.
6/6/2012	Corey Kos		Revised to include feedback from key customer regarding items that need clarified (monitoring, administration, call-out processes, etc.)
06/25/12	TRasmussen	1.0	Final

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1   PURPOSE

The purpose of this service level agreement (SLA) is to describe the nature and operational policies of the services provided by Enterprise Technology Services (ETS) to our customers as well as the roles and responsibilities of non-ETS support staff. Items discussed in this agreement are the hours of operation, contact methods, service and support description and standards, and respective responsibilities. It should be used as a reference when requesting assistance. This agreement is between the State of Alaska, Department of Administration, Enterprise Technology Services and our infrastructure services customers.

2   SCOPE OF SERVICES

This section describes services provided by ETS Infrastructure Services; server deployment, operating system management, software, networking, backup and disaster recovery, monitoring, and call center functions.

2.1   HARDWARE

This section will describe servers, networking, storage services and backups.

2.1.1   SERVERS

ETS currently provides two main Server offerings. Physical servers dedicated to a particular customer and Virtual servers running on shared hardware. A list of standard physical servers is located in the Service Inventory (Attachment). Virtual servers are provided on either the current version of VMware or via Solaris Zones.

Requests for services must be initiated by the customer by opening a support request ticket in ETS's help desk system (USD). USD can be accessed at the following location https://helpdesk.state.ak.us/, or through the ETS website http://doa.alaska.gov/ets/ . The request should be assigned to the group "adm.ets.infr". Based on the customer requirements appropriate cost information will be added to the request for customer approval prior to deployment. If this includes procurement of physical servers ETS will match the requirements provided by the customer to current supported hardware options and will generate a configuration and quote for the physical device.

The hosting rate for dedicated, physical servers does not include the cost of the initial server purchase, related maintenance agreements, or life-cycle management. Customers should maintain hardware refresh cycles that meet business needs. Clients treat the servers as their own except for physical access. Physical access to the servers is provided on request with an ETS escort.

ETS provides qualified technical support staff during normal State working hours, with availability for critical incident response 24x365. Unplanned outages are detected by automated monitoring systems and will result in a dispatch of support staff within 30 minutes of detection; situation assessment within 60 minutes of detection; and a service restoration action plan within 120 minutes of detection.

New services will be provisioned within 5 working days of a request being submitted through the Universal Service Desk. Server availability metric is 99.99.

2.1.2   BACKUPS

ETS provides data protection in three categories:

1. **Backup** – Capable of restoring data to a point in time due to data loss or corruption on the system where the data was generated. This backup may be located at the same location of the protected system. By default this is provided via online disk backup.

2. **Disaster Recovery** - Capable of recovering data to a point in time due to loss of the system or supporting infrastructure that generated the data. This backup is off-site from the primary location of the protected system. By default this is provided via replicated online disk backup or tape backups rotated off-site. The DR configuration is noted on the Customer's Service Inventory sheet.

3. **Archiving** – data protection similar to the backup category only tailored towards data which requires long-term retention due to business needs. By default this is provided via tape backups.

Dedicated, physical hosts are by default backed up via the ETS TSM service (see FY12 rates sheet) nightly and maintained for 7 days unless otherwise specified in the Data Protection Schema (Attachment). Data is copied off of TSM storage onto backup tape for disaster recovery and shipped off-site.

Virtual hosted systems are backed up nightly via the underlying storage system and space for backups is charged at the backup disk space rate. (See FY12 rates sheet) These backups are replicated off-site and maintained for a rolling 7 day window unless otherwise specified in the Data Protection Schema (Attachment).

2.1.3   NETWORKING

ETS Infrastructure Services supports the network infrastructure supporting the Internal Data Center (IDC) and provides network connectivity for hosted services. Infrastructure Services work with ETS Network Services and the State Security Office to provide network connectivity in the secure DMZ used for public facing services. All services are provided in a high-availability configuration unless otherwise noted or restricted by the customer's dedicated hardware. Network access service levels are targeted at %.99.99 uptime per year.

The combined SOA Network Services will provide an end to end service (network and application) to support desktop transaction response of one second 90 percent and three second response for all user actions.

2.1.4   STORAGE SERVICES

ETS provides storage services for data center customers via a protocol agnostic approach. CIFS, iSCSI, NFS, FC, and FCOE are all supported protocols. These services are delivered via redundant storage fabrics within the data center space. ETS also and provide NetApp SnapMirror targets to provide disaster recovery services for current NetApp organizations.

The storage availability metric is 99.99.

The 3 tiers of storage are noted below.

1. High Capacity Storage – 10K RPM SATA drives ideal for standard storage needs and bulk data.
2. High Speed Storage – 15K RPM SAS drives ideal for high performance needs.

3. Bulk Storage – 10K RPM SATA drives used for backup data, this lower tier accounts for the lack of I/O that is generated.

2.2 SOFTWARE

This section will describe operating systems, patches and updates and administration.

ETS is responsible to software supply licenses and maintain valid support agreements for the software identified in the Software License and Maintenance Agreement of contract 2010-0200-9388-B.

2.2.1 OPERATING SYSTEM (OS)

ETS currently provides servers as managed or un-managed.

Managed servers come with full hardware and O.S support including installation, configuration, networking, storage configuration, patching, and break fix response. The customer is responsible for the applications and services that the server is used to provide.

Un-Managed servers come with only hardware and infrastructure support and the customer is responsible for all O.S. management, patching, and break/fix response in addition to the applications and services the server hosts.

ETS currently supports Windows 2003/2008, Solaris 9/10, and ESX 4/5 operating systems. Customer's requiring non-standard operating systems may obtain a TMC waiver if needed to meet business needs however ETS will provide these servers as un-managed and OS support will be provided by the Customer.

2.2.2 PATCHES AND UPDATES

On standard, managed systems operating system and security related patches and updates will be applied by ETS during the weekly network maintenance window which is from 04:00 a.m. till 06:00 a.m. every Wednesday morning, and from 07:00 a.m. to 09:00 a.m. every Sunday morning.

Security patches will be installed on the operating systems within the time frame established in State of Alaska Security Policy, Security Patch Management (SP009). Other changes to the OS or Hardware will be done following the ETS Change Control Board (CCB) process and notification.

2.2.3 ADMINISTRATION

ETS manages permissions and access via the SOA Active Directory. ETS will work with the Customer to establish an Active Directory group that will be delegated administrative privileges on the hosted systems. The Customer may elect to have ETS manage this group or be delegated rights to manage the membership of the administrative group assigned to their systems.

ETS will establish cooperative administrative permissions on all managed systems to ensure that ETS support staff retain administrative access for support purposes. This will allow for customers to perform software installations to support their services and ensure that ETS staff can appropriate maintain the O.S. Support for non-standard, advanced OS features such as clustering and load balancing will be negotiated with the customer under the ETS consulting rate or provided by the Customer.

ETS provides remote administration for Windows systems by enabling Remote Desktop Services for the Administrative group. Solaris systems can be managed remotely via SSH. ESX hosts will be delegated via ETS' central vSphere infrastructure. All other remote access is the responsibly of the customer to configure and maintain.

2.3   MONITORING

ETS provides a server health monitoring system called Big Brother. The ETS Operations team monitors Big Brother 24x365 and provides callout notification to ETS support staff and/or customer support staff.

Call out instructions need documented for each system in what is called the "notes file" for the system object in Big Brother. It is the customer's responsibility to keep the notes file up-to-date with the current contact information.

The Big Brother availability metric is 99.99

2.3.1   BIG BROTHER STANDARD

The standard version of Big Brother comes with features that allow monitoring the metrics listed below.

Exhibit 1   Big Brother Metrics

Metric	Description
Conn	This is the status of the ping (connectivity) test.
CPU	This is the status of the CPU test. The CPU test requires the Big Brother client; the status is based on the five-minute load average as reported in the second column by the uptime command. The administrator can change the thresholds for this test.
Disk	This is the status of the disk check. The disk test requires the Big Brother client. By default, the indicator turns yellow when the disk is 90% full and red at 95%. The administrator can change these thresholds.
Msgs	This is the status of the event log check. This test requires the Big Brother client. By default, only NOTICE and WARNING conditions are reported. A NOTICE condition reports a red status and sends a notification; a WARNING reports a yellow status. How long the status lasts is determined by the MSGEXPIRE setting in bbdef-client.sh. You can define the messages to look for using the etc/bb-msgstab file.
procs	This is the status of the processes check. This test requires the Big Brother client. It makes sure that the processes defined in the bb-proctab file exist on the local machine. If a process does not exist, and it has been defined in bb-proctab, then the code is either yellow or red and a notification is sent if appropriate. Big Brother uses the ps command to get a current process listing.
Mem	Memory usage – yellow if 95%, red if 98% - those values are configurable by the administrator
Pagefile	Tests utilization of the system pagefile (swap) system. Thresholds can be set by the administration.
Svcs	Predetermined list of services which should be running on the servers.

2.3.2 BIG BROTHER CUSTOM

Any configurable options in the Big Brother system, such as monitoring of specific services running on the server or custom monitoring through external scripts and executables is the responsibility of the customer and can be achieved through the installation of the big Brother client on each monitored server.

2.4 CALL CENTER

2.4.1 HOURS OF OPERATION

The ETS call center can be reached 24 x 365 according to the following schedule:

During business hours:

Anchorage	907-269-5016 (press IVR #4), fax 269-5017
Fairbanks	907-451-5288 (press IVR #4), fax 451-5122
Juneau	907-465-1818, fax 465-2161
Other locations in Alaska	888-565-8680 (press IVR #4)
Email address	help_center@admin.state.ak.us

Call-out after hours:

Operations	907-465-5748

Note: The services will not be available during maintenance hours (see Patches and Updates).

2.4.2 INCIDENT RATING

Exhibit 2   Call Center Incident Ratings

Rank	Severity	Guideline
1	Critical	The system is inoperative statewide; Nobody can use it.
2	Severe	An entire department or division is unable to use the system
3	Serious	A user or small group of users suffer a loss of functionality and/or data
4	Routine	A single user experiences an error, cannot access the system or loses data, and system operation can otherwise be verified as good.

2.4.3 RESPONSE PERFORMANCE AND ESCALATION SCHEDULE

The following is a guideline of the expected level of performance depending on the severity of incidents as outlined in the preceding paragraph:

Exhibit 3   Call Center Response and Escalation Schedule

Rank	Severity	Acknowledge within	Escalate to	If not resolved within
1	Critical	30 minutes	Infrastructure Services Manager	1 hour
2	Severe	2 clock hours	1	3 business hours

3	Serious	4 clock hours	2		5 business hours
4	Routine	24 clock hours	3		10 business days

2.4.4 UNIVERSAL SERVICE DESK (USD)

USD is ETS's ticket management system. All requests for assistance in support ETS services must be done through the creation of a USD ticket.

Ticket Creation

Tickets can be created either online at https://helpdesk.state.ak.us/CAisd/pdmweb.exe or via the call center (see Call Center).

Ticket evaluation and resolution targets

ETS uses a set of guidelines outlined below to set the urgency level and resolution guidelines for incidents. The following factors are considered to establish priority:

- ☑ Risk to life or limb
- ☑ The number of services affected - may be multiple services
- ☑ The level of financial losses
- ☑ Regulatory or legislative breaches
- ☑ Service to the public

These factors are weighted against the following impact categories:

- ☑ **Major**-Ten or more customers or connections affected, a high visibility agency or individual affected, multiple services affected, a   potential risk to life and limb, or a federal or state regulatory or legislative breach
- ☑ **Significant**-Two to nine customers affected or potentially affected
- ☑ **Minor**-One customer affected or potentially affected

Based on these considerations, the following priorities and corresponding performance targets govern the processing of USD tickets:

Exhibit 4   Service Desk Priorities and Performance Targets

Priority	Factors	Resolution Target	Service Hours	Impact/Urgency
1 - Critical	business stopped mission critical life and safety critical timeframe VIP list 10 or more customers service to the public stopped	4 hours	24/7	Major-High
2 - Urgent	severe business impairment less than 10 customers service to the public impaired	8 hours	24/7	Major-Medium Significant -High

3 - Elevated	business impairment single customer workaround available	3 days	Business hours	Major-Low Significant-Medium Minor-High
4 - Routine	Business not impacted Information	5 days	Business hours	Significant-Low Minor-Medium Minor-Low
5 - Scheduled		Scheduled date	Business hours	

3 DISPUTE RESOLUTION

The agency and ETS agree that in the event a dispute arises involving the implementation and maintenance of this agreement, every effort will be made to settle such disputes informally and amicably in the spirit of mutual cooperation on which this agreement is predicated.

When the two teams experience differences of opinion in how to deal with a given issue, the conflict will be resolved according to the following elevation structure:

Exhibit 5   Dispute Resolution Escalation

Level	Factors
Level 1	ETS Infrastructure Services Manager Customer Business Contact
Level 2	ETS Service Manager / ETS Infrastructure Services Manager Customer Business Contact / Customer Executive Sponsor
Level 3	ETS Operations Manager / ETS Service Manager / ETS Executive Leadership Customer Business Contact / Customer Executive Sponsor

4 ROLES AND RESPONSIBILITIES

This section lists the activities and basic deliverables for ETS and its Customers in order to guarantee the smooth operation of services. Detailed per service roles are also detailed in the Service Inventory.

4.1 ENTERPRISE TECHNOLOGY SERVICES

Responsible for monitoring the physical infrastructure supporting the customer's services including monitoring, alerting, and 24x265 call out. ETS will also participate in the ETS Change Control Board (CCB) and provide notices to customers for any planned or unplanned events

4.2 CUSTOMER

Responsible for all applications and services deployed on the hosting infrastructure unless otherwise specified in the Service Inventory (Attachment). The customer will provide advisories to customers and users of the system about outages not related to hardware and operating system updates and assist with communication when ETS communicates planned or unplanned events that impact the Customers users.

5 OPERATIONAL TERMS AND POLICY

This section describes the terms under which the agreement will be arbitrated and either maintained or dissolved.

5.1 SUPERVISION

This agreement is supervised by the Customer Business Point of Contact, ETS Infrastructure Manager, and ETS Service Manager.

5.2 RENEWAL

The agreement will be submitted to the Customer for renewal approximately 90 days prior to the end of the fiscal year. If renewed the agreement will be in effect for the duration of the State fiscal (12 months - from July 1st - June 30th) If the customer or ETS choose not to renew the contract, prior notice will be given to the other party no later than 30 days before the end of the fiscal year and ETS will decommission the services.

5.3 CANCELATION

The agreement can be cancelled by prior notice of at least 30 days. ETS will continue to provide services for 30 days after the agreed end of the agreement, to allow the customer to make arrangements to move their data and executable to a different host.

6 SERVICE INVENTORY (ATTACHMENT)

6.1 SERVER MANIFEST

The server manifest identifies the environment, location, and name of the service item(s).

6.2 ITEMIZED COST SHEET

The itemized cost sheet detailed costs per service item(s) which are recurring unless otherwise stated.

6.3 SUPPORT MATRIX

The support matrix identifies the support role of ETS or the Customer for the following components.

- Hardware
- Operating System
- Application

7 DATA PROTECTION SCHEMA (ATTACHMENT)

7.1 BACKUP SCHEDULE (IF NON-STANDARD)

The backup schedule defines the schedule if it deviates from the SLA default.

7.2 DISASTER RECOVERY – SYSTEMS

Entity responsible for Disaster recovery of the systems. (Example: network, servers, or storage).

7.3 DISASTER RECOVERY – SERVICES

Entity responsible for disaster recovery of the services. (Example: application, web, or database services).

7.4 RECOVERY POINT OBJECTIVE (RPO)

The prior point in time that the business needs to be able to recover services to; for example a 24 hour RPO would mean that recovery to the prior night's backups and hence a 24 hour loss of data would be acceptable.

7.5 RECOVERY TIME OBJECTIVE (RTO)

The time that the business expects the services to be back online if a disaster occurs.

8 PLANNED MAINTENANCE WINDOWS (ATTACHMENT)

Defines the agreed upon planned maintenance windows if different than the standard noted above.

9 CONTACTS

Enterprise Technology Services:

Role	Name	Contact Information
ETS Service Manager	Carmine Dicostanza	Phone: (907) 465-3373 Email: Carmine.Diconstanza@alaska.gov
ETS Infrastructure Manager	Corey Kos	Phone: (907) 465-5787 Email: Corey.Kos@alaska.gov

Customer

Role	Name	Contact Information
Customer Business Point of Contact		Phone: Email:
Customer Business Point of Contact		Phone: Email:

10 SIGNATURE

_____ _____ _____

ETS Service Manager   Signature   Date

_____ _____ _____

Customer Business Contact   Signature   Date